

INTERNATIONAL SEARCH REPORT

International application No.

EP02/07971

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

SEE SUPPLEMENTAL SHEET

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

The International Searching Authority has determined that this international application contains more than one invention or group of inventions, namely:

1. Claims 1-6

Pneumatic thread tensioner with a curved airflow deflection surface which is a transition-free extension of the guide channel.

2. Claims 7-13

Thread-processing system with an arrangement for changing the flow rate or pressure of the airflow along the deflection surface of a thread tensioner.

INTERNATIONAL SEARCH REPORT

 Internat application No
 PCT 02/07971

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 D03D47/34 D04B15/44 B65H59/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 D04B B65H D03D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 1 469 533 A (NAT RES DEV) 6 April 1977 (1977-04-06) cited in the application	7
A	page 5, line 37 - line 60; figure 4	1
A	US 4 637 229 A (TAYLOR JR JAMES W) 20 January 1987 (1987-01-20) the whole document	1,7
Y	PATENT ABSTRACTS OF JAPAN vol. 017, no. 655 (C-1136), 6 December 1993 (1993-12-06) -& JP 05 209343 A (NORIMASA SHODA; OTHERS: 01), 20 August 1993 (1993-08-20) abstract	7

-/---

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

10 September 2003

Date of mailing of the international search report

18/09/2003

Name and mailing address of the ISA

 European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Rebiere, J-L

INTERNATIONAL SEARCH REPORT

Intern:

Application No

PCT

02/07971

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 014, no. 115 (C-0696), 5 March 1990 (1990-03-05) -& JP 01 314762 A (SADAO SAWADA), 19 December 1989 (1989-12-19) abstract; figure 5 ----	1,7
A	US 5 816 296 A (SCHUSTER RAINER) 6 October 1998 (1998-10-06) cited in the application the whole document ----	7
A	WO 00 15532 A (DAMMANN PETER ;BARMAG BARMER MASCHF (DE); BARTKOWIAK KLAUS (DE)) 23 March 2000 (2000-03-23) page 7, line 27 - line 29; figure 2 -----	

INTERNATIONAL SEARCH REPORT

Internat

Application No

PCT

02/07971

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 1469533	A	06-04-1977	DE 2444973 A1 IT 1019344 B JP 50076474 A	03-04-1975 10-11-1977 23-06-1975
US 4637229	A	20-01-1987	DE 3603913 A1 GB 2170828 A IT 1187899 B JP 61231249 A	14-08-1986 13-08-1986 23-12-1987 15-10-1986
JP 05209343	A	20-08-1993	NONE	
JP 01314762	A	19-12-1989	JP 1692470 C JP 3055575 B	27-08-1992 23-08-1991
US 5816296	A	06-10-1998	DE 19611320 A1 EP 0796936 A2 JP 2752609 B2 JP 10001846 A	25-09-1997 24-09-1997 18-05-1998 06-01-1998
WO 0015532	A	23-03-2000	CN 1316970 T WO 0015532 A1 EP 1112218 A1 US 2001009053 A1	10-10-2001 23-03-2000 04-07-2001 26-07-2001